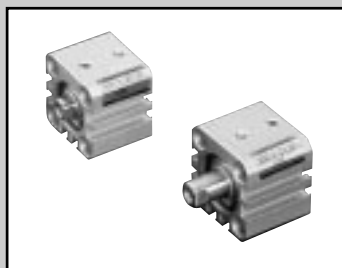


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending



Compact cylinder
Single acting extend type

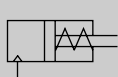
SSD-X Series

Single acting retract type with switch

SSD-Y Series

● Bore size: ϕ 12, ϕ 16, ϕ 20, ϕ 25, ϕ 32, ϕ 40, ϕ 50

JIS symbol SSD-X



SSD-Y



Specifications

Descriptions	SSD-X SSD-XL (with switch)	SSD-Y SSD-YL (with switch)
Bore size mm	ϕ 12 ϕ 16 ϕ 20 ϕ 25 ϕ 32 ϕ 40 ϕ 50	
Actuation	SSD-X/XL: Single acting extend, SSD-Y/YL: Single acting retract type	
Working fluid	Compressed air	
Max. working pressure MPa	1.0	
Min. working pressure MPa	0.2	0.17 0.12
Withstanding pressure MPa	1.6	
Ambient temperature °C	-10 to 60 (no freezing)	
Port size	M5	Rc1/8 Rc1/4
Stroke tolerance mm	+1.0 0	
Working piston speed mm/s	50 to 500	
Cushion	None	
Lubrication	Not required (when lubricating, use turbine oil ISO VG32.)	
Allowable absorbed energy J	0.004 0.01 0.016 0.021 0.025 0.092 0.1	

Note: Do not leave the single acting cylinder in the pressurized state. If left in the pressurized state, the piston rod may not return with spring force when pressure is released. Use the double acting if use is required at leaving under elevated pressure.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ϕ 12	5, 10	10	5
ϕ 16			
ϕ 20			
ϕ 25			
ϕ 32			
ϕ 40	10, 20	20	10
ϕ 50			

Note: Refer to the following table when a switch is used.

Switch quantity and min. stroke length (mm)

Switch quantity	1	2
Switch model no.	T*	T*
Bore size (mm)		
ϕ 12	5	5
ϕ 16	5	5
ϕ 20	5	5
ϕ 25	5	5
ϕ 32	5	5
ϕ 40	10	10
ϕ 50	10	10

Note: Stroke less than 10 mm is not available for 2 color indicator, off-delay, strong magnetic field proof, or types with T1* or T8* switch.

Switch specifications

- 1 color/2 color indicator/strong magnetic field proof

220 VAC is available for T0/T5 switches.
Consult with CKD for conditions.

Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire						Proximity 2-wire	
	T1H, T1V	T2H, T2V, T2JH, T2JV	T2YH, T2YV	T3H, T3V	T3PH, T3PV (Custom order)	T3YH, T3YV	T0H, T0V	T5H, T5V	T8H, T8V			T2YD		
Applications	Programmable controller relay, small solenoid valve	Programmable controller dedicated		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection	Programmable controller, relay			Programmable controller dedicated		
Output method	-			NPN output	PNP output	NPN output	-							
Power voltage	-			10 to 28 VDC			-							
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (Note 1)		100 mA or less		50 mA or less	5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			Red/green LED (ON lighting)
Leakage current	1 mA or less with 100 VAC 2 mA or less with 200 VAC	1 mA or less		10 μA or less			0 mA						1 mA or less	

- With preventive maintenance output

Descriptions		Proximity 3-wire	Proximity 4-wire	Proximity 3-wire	Proximity 4-wire
		T2YFH/V	T3YFH/V	T2YMH/V	T3YMH/V
Applications		Programmable controller dedicated	Programmable controller, relay	Programmable controller dedicated	Programmable controller, relay
Output method		NPN output			
Light	Installation position adjustment	Red/green LED (ON lighting)			
	Preventive maintenance output	-		Yellow LED (ON lighting)	
Regular output	Power voltage	-	10 to 28 VDC	-	10 to 28 VDC
	Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	30 VDC or less
	Load current	5 to 20 mA	50 mA or less	5 to 20 mA	50 mA or less
	Leakage current	1 mA or less	10 μA or less	1.2 mA or less	10 μA or less
Preventive maintenance output	Load voltage	30 VDC or less			
	Load current	20 mA or less	50 mA or less	5 to 20 mA or less	50 mA or less
	Leakage current	10 μA or less			

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current above: 20 mA at 25 °C. The current will be lower than 20 mA if ambient temperature around switch is higher than 25 °C.
(5 to 10 mA at 60 °C)

Cylinder weight table (weight with switch includes weight with two cylinder switches)

(Unit: g)

Stroke length (mm)	5		10		20	
	w/o SW	With switch	w/o SW	With switch	w/o SW	With switch
φ 12	40	80	49	89	-	-
φ 16	52	92	64	104	-	-
φ 20	74	114	89	129	-	-
φ 25	107	147	127	167	-	-
φ 32	155	195	183	223	-	-
φ 40	-	-	285	325	358	398
φ 50	-	-	459	499	572	612

SSD-X/SSD-Y spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	SSD-X		SSD-Y	
		Stroke length 0	Full stroke length	Stroke length 0	Full stroke length
φ 12	5	8.7	13.7	2.9	11
	10	2.9	13.7	2.9	11.3
φ 16	5	10.2	15.1	3.5	13.2
	10	5.4	15.1	3.5	13.2
φ 20	5	16.8	24	11.8	30.4
	10	9.7	24	12.7	30.3
φ 25	5	17.1	23.5	10.8	26.5
	10	10.8	23.5	10.8	26.5
φ 32	5	24.1	28.5	17	27
	10	19.6	28.5	17.9	27.4
φ 40	10	28.9	38.2	19.3	33
	20	19.6	38.2	19.9	40.2
φ 50	10	33.3	47.9	24.5	84.3
	20	18.8	47.9	23.1	82.3

How to order

Without switch

SSD-X - **12** - **5** - **N** - **LB** - **I**

With switch

SSD-XL - **12** - **5** - **T0H** - **R** - **N** - **LB** - **I**

2 color indicator, off-delay, with T1* switch (only $\phi 12/\phi 16$)

SSD-XL1 - **12** - **5** - **T2YH** - **R** - **N** - **LB** - **I**

A Model no.							
B Bore size							
C Port thread type							
D Stroke length							
E Switch model no.							

Caution for model No. selection

- Note 1: Switches other than listed **E** switch model No. are available. (custom order)
Refer to Ending 1 for details.
- Note 2: Strong magnetic field proof switches are not available for $\phi 12$, $\phi 16$. T8* switch cannot be installed on $\phi 12$ to $\phi 32$.
- Note 3: $\phi 12$ to $\phi 25$ piston rod material is stainless steel as standard. The snap ring is changed from copper to stainless steel. When the male thread rod end is selected, stainless steel nuts are provided.
- Note 4: **Copper and PTFE free as standard**
- Note 5: Mounting bracket is attached at shipment.
- Note 6: When selecting LB2, FA, piston rod projecting dimension WF differs from standard. Refer to the dimensions on pages 939 to 940.
- Note 7: "I" and "Y" can not be selected at the same time.
- Note 8: Refer to Ending 89 for custom specifications of rod end form.
- Note 9: Refer to pages 720, 721 for the variation and option combination.
- Note 10: 2 color indicator, off-delay, strong magnetic field proof, 10 mm or shorter type with T1* or T8* switch is not available.

<Example of model number>

SSD-XL-12-5-T0H-R-N

Model: Compact cylinder

- A** Model no. : Single acting spring return type
- B** Bore size : $\phi 12$ mm
- C** Port thread type : Rc thread
- D** Stroke length : 5 mm
- E** Switch model no. : Reed switch T0H, lead wire length 1m
- F** Switch quantity : One on rod end
- G** Option : Rod end male thread

Symbol	Descriptions
A Model no.	
SSD-X	Single acting extend type
SSD-XL	Single acting extend type with switch
SSD-XL1	$\phi 12$, $\phi 16$, 2 color indicator with preventive maintenance switch
SSD-Y	Single acting retract type
SSD-YL	Single acting retract type with switch
SSD-YL1	$\phi 12$, $\phi 16$, 2 color indicator, off-delay type, with T1* switch

B Bore size (mm)	
12	$\phi 12$
16	$\phi 16$
20	$\phi 20$
25	$\phi 25$
32	$\phi 32$
40	$\phi 40$
50	$\phi 50$

C Port thread type	
Blank	Rc thread
NN	NPT thread ($\phi 32$ and over) (custom order)
GN	G thread ($\phi 32$ and over) (custom order)

D Stroke length (mm)									
	Bore size (mm)	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	
5	5	●	●	●	●	●			
10	10	●	●	●	●	●	●	●	
20	20						●	●	

E Switch model no.				
Axial lead wire	Radial lead wire	contact	Display	Lead Wire
T0H*	T0V*	Reed	1 color indicator	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator	2-wire
T1H*	T1V*			
T2H*	T2V*	Proximity	1 color indicator	2-wire
T3H*	T3V*			3-wire
T3PH*	T3PV*		1 color indicator (custom order)	
T2YH*	T2YV*		2 color indicator	2-wire
T3YH*	T3YV*			3-wire
T2YFH*	T2YFV*		2 color indicator (w/o light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*			4-wire
T2YMH*	T2YMV*		2 color indicator (w/ light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*			4-wire
T2JH*	T2JV*		Off-delay type	2-wire
T2YD*	-	Switch for strong magnetic field		2-wire
T2YDT*	-			

*Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

F Switch quantity	
R	one on rod side
H	one on head side
D	2

G Option	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)

H Mounting bracket	
LB	Axial foot
LB2	Axial foot (compact type)
CB	Clevis (pin and snap ring attached)
CB2	Clevis (compact type) (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

I Accessory (permissible if rod end male thread "N" was selected.)	
I	Rod eye
I2	Rod eye (compact type)
Y	Rod clevis (pin and snap ring attached)
Y2	Rod clevis (compact type) (pin and snap ring attached)

H Mounting bracket
Note 5
Note 6

I Accessory
Note 7

How to order switch



Switch model no.
(Item E on previous page)

How to order mounting bracket

Bore size (mm)	φ 12	φ 16	φ 20	φ 25	φ 32	φ 40	φ 50
Mounting bracket							
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50
Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50
Clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50

Note 1: 2 pcs./set is applied for a foot type mounting bracket.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Compact cylinder
Space saving structure